MARYLAND HISTORICAL TRUST
DETERMINATION OF ELIGIBILITY FORM

NR Eligible: yes ___ no X

Property Name: SHA Bridge No. 0802200, MD 225 over Mattawoman Cr Inventory Number: CH-781

Address: MD 225 over Mattawoman Creek Historic district: ___ yes X no

City: Potomac Heights, MD Zip Code: ___ County: Charles

USGS Quadrangle(s): Port Tobacco

Property Owner: Maryland State Highway Administration Tax Account ID Number: ___

Tax Map Parcel Number(s): ___ Tax Map Number: ___

Project: Remedial repairs to SHA Bridge No. 0802200, MD 225 over M Agency: FHWA/SHA

Agency Prepared By: ___

Preparer's Name: Craig Tuminaro, URS Corporation Date Prepared: 10/25/2004

Documentation is presented in: Project Review and Compliance files

Preparer's Eligibility Recommendation: ___ Eligibility recommended X Eligibility not recommended

Criteria: X A ___ B X C ___ D Considerations: ___ A ___ B ___ C ___ D ___ E ___ F ___ G

Complete if the property is a contributing or non-contributing resource to a NR district/property:

Name of the District/Property: ___

Inventory Number: ___ Eligible: ___ yes Listed: ___ yes

Site visit by MHT Staff ___ yes X no Name: ___ Date: ___

Description of Property and Justification: *(Please attatch map and photo)*

The following DOE was prepared by URS Corporation for SHA:
Description:
The MD 225 Bridge over Mattawoman Creek (MIHP #CH-781, Bridge 0802200) was built in 1957 at the site of at least two earlier bridges over Mattawoman Creek in Charles County, MD. The present MD 225 Bridge is a three-span prestressed concrete girder bridge with a concrete deck. The deck carries two lanes of traffic and is supported by two piers that contain seven concrete Monotube columns. It is one of only two bridges built in Charles County during the 1948-1960 period and one of twelve pre-stressed concrete bridges built throughout Maryland in 1957. The bridge is significant as a historically important crossing, associated with the developments and improvements to roadways in northeastern Charles County, especially those that serviced the Indian Head Naval Powder Factory, now known as the Naval Surface Warfare Center, Indian Head Division (NSWC).

Determination of Eligibility:
The MD 225 Bridge (MIHP #CH-781, Bridge 0802200) is eligible for listing in the National Register of Historic Places under Criterion A on the local level, with a period of significance of 1957. The bridge is a historically important crossing, associated with the development of Charles County, and specifically the area around the Indian Head naval facility (now known as Naval

MARYLAND HISTORICAL TRUST REVIEW

Eligibility recommended ___ **Eligibility not recommended** X

Criteria: ___ A ___ B ___ C ___ D **Considerations:** ___ A ___ B ___ C ___ D ___ E ___ F ___ G

MHT Comments:

Tim Tamburrino ✓ — **Reviewer, Office of Preservation Services** 8/10/09 — **Date**

N/A — **Reviewer, National Register Program** ___ — **Date**

200902044

Surface Warfare Center, Indian Head Division), in the northeastern area of the county. The crossing connected portion of the ounty with the village of Indian Head and the naval facility which employed many local residents in its initial construction in 1890 and after. The first bridge, likely erected in the 1910s was replaced in 1928 by two concrete slab bridges. The two bridges were destroyed by a flood in 1955 and were replaced by the existing bridge.

The MD 225 Bridge is not National Register-eligible under Criterion B, as it is not associated with an individual significant on the local, state, or national level.

The MD 225 Bridge is National Register-eligible under Criterion C on the state level with a period of significance of 1957. As one of the first fifteen prestressed concrete bridges built in the mid-to-late 1950s in Maryland, it is significant in the history of bridge engineering and its use of prestressed concrete exemplifies an innovative technological solution. The bridge also retains its integrity of location, design, setting, materials, workmanship, feeling and association and is therefore a representative example of a three-span prestressed concrete girder bridge.

SHA reviewed the draft "Phase II, State Historic Bridge Context & Inventory of Modern Bridges, Survey Report and Assessments of Significance" prepared by URS Corporation for SHA in November 2004, as well as the attached MIHP form for SHA Bridge No. 0802200. The form stresses the nearby location of the Indian Head Naval Base as the factor most influencing Bridge 0802200's construction in 1957. On February 4, 2009, SHA visited the bridge site and considered its likely relationship with the Indian Head facility. SHA also conducted additional research regarding highway construction in Charles County in the early-to-mid 1950s. SHA disagrees with URS' assessment that Bridge No. 0802200 is eligible for the NRHP under Criteria A and C.

In 1957, SHA was widening MD 225 from La Plata, the county seat, towards Indian Head. At the same time, MD 210, which connects southern Prince George's County with Washington, DC, was widened in Charles County to provide an improved land route between Indian Head Naval Base and Washington.

Furthermore, the form does not discuss if during the colonial period or the 19th century, the MD 225 crossing had a ferry or a bridge. It would seem that if it existed that such services would be noted on a map such as Martinet's 1885 Map of Maryland, but it is not. Although there was steamboat service on the creek, there is no town at this site, which would indicate a place frequented by residents and travelers. Furthermore, the Maryland State Roads Commission Map from 1927 notes that MD 225 as a gravel and shell road, still connecting Indian Head with La Plata. It was not a major highway that required concrete or asphalt.

Under Criteria A, URS states that the Mattawoman crossing was historically significant, which would suggest that it had been a place used by residents and travelers for some time. The Indian Head naval facility was constructed in the 1890s, thus making the 1957 bridge the third crossing in a period of approximately 60 years. The Maryland State Roads Commission replaced the washed out 1920s bridge starting in late 1956, completing it in 1957. While replacing the lost bridge was undoubtedly important, the SRC was completing bridge projects across the state as part of its Twelve Year Program. Given the Cold War period of construction and the extension of MD 210 into Charles County to improve access to Washington, DC, it would seem that the improvements to MD 225 were secondary to the improvements to MD 210.

Under Criterion C, URS noted that the bridge was one of 12 prestressed bridges constructed in the state in 1957. During the mid-to-late 1950s, the SRC was constructing these types of bridges on the new interstate system, such as I-83. Construction of a bridge on a minor highway does not demonstrate a significant design. Furthermore, the bridge does not embody distinctive characteristics of a type, period or method of construction. Rather, SHA Bridge No. 0802200 demonstrates that the SRC found the material and design useful in a variety of situations, and frequently used it in 1957. The SRC had made use of standardized plans since the 1910s, and the prestressed concrete girder was the latest example of that design methodology.

MARYLAND HISTORICAL TRUST REVIEW

Eligibility recommended _____ **Eligibility not recommended** _____

Criteria: ___A ___B ___C ___D **Considerations:** ___A ___B ___C ___D ___E ___F ___G

MHT Comments:

_____ _____

Reviewer, Office of Preservation Services **Date**

_____ _____

Reviewer, National Register Program **Date**

As a result of this analysis, SHA has determined that SHA Bridge No. 0802200, MD 225 over Mattawoman Creek, is not eligible for the NRHP under Criteria A or C. Research conducted did not identify persons of local, state or national significance associated with the bridge's construction, and the bridge does not meet NRHP Criterion B. Criterion D was not investigated as part of this study.

The boundary of the bridge is confined to SHA's right-of-way limits for MD 225 over Mattawoman Creek.

Sources consulted:

The Maryland State Roads Commission Reports, 1910-1928, Baltimore, MD
Brown, Jack, "Charles County Maryland: A History," downloaded from Google Books 6/3/2009

MARYLAND HISTORICAL TRUST REVIEW

Eligibility recommended _____ **Eligibility not recommended** _____

Criteria: ___A ___B ___C ___D **Considerations:** ___A ___B ___C ___D ___E ___F ___G

MHT Comments:

_____ _____

Reviewer, Office of Preservation Services **Date**

_____ _____

Reviewer, National Register Program **Date**

CH-781
MD 225 Bridge over Mattawoman Creek
Mattawoman vic.
1957

Bridge No. 0802200 is a three-span, prestressed concrete girder bridge, built in 1957, that carries MD 225 over Mattawoman Creek. The bridge runs northeast-southwest and carries two lanes of vehicular traffic, one in each direction. The bridge spans Mattawoman Creek with a vertical clearance of approximately 8.5 feet. The bridge is approximately 180 feet long and 38 feet wide, with a clear roadway width of 30 feet. Metal joint plates are located at the meeting point of each of the spans and at each end of the bridge. It appears that the deck has been surfaced with blacktop within the past ten years. The substructure of the bridge is composed of two large bents. Each bent consists of seven concrete-filled, fluted, steel Monotubes, 18-inch diameter columns. The columns are capped by concrete slabs that support nine concrete beams that run the length of the bridge and support the concrete deck. The bridge appears to retain its original parapet. The rail portion consists of two horizontal pipes, with vertical members spaced approximately four feet apart. The railing terminates into concrete end panels.

The MD 225 Bridge over Mattawoman Creek (MIHP ID# CH-781, Bridge 0802200) was built in 1957 at the site of at least two earlier bridges over Mattawoman Creek in Charles County, MD. The present MD 225 Bridge is a three-span prestressed concrete girder bridge with a concrete deck. The deck carries two lanes of traffic and is supported by two piers that contain seven concrete Monotube columns. It is one of only two bridges built in Charles County during the 1948-1960 period and one of twelve pre-stressed concrete bridges built throughout Maryland in 1957. The bridge is significant as a historically important crossing, associated with the developments and improvements to roadways in northeastern Charles County, especially those that serviced the Indian Head Naval Powder Factory, now known as the Naval Surface Warfare Center, Indian Head Division (NSWC).

Maryland Historical Trust
Maryland Inventory of
Historic Properties Form

Inventory No. CH-781

1. Name of Property (indicate preferred name)

historic	MD 225 Bridge over Mattawoman Creek
other	Bridge No. 0802200

2. Location

street and number	MD 225 at Mattawoman Creek (Hawthorne Rd)	N/A	not for publication
city, town	Potomac Heights Indian Head	N/A	vicinity
county	Charles		

3. Owner of Property (give names and mailing addresses of all owners)

name	Maryland State Highway Administration				
street and number	707 N. Calvert Street			telephone	410-545-0300
city, town	Baltimore	state	MD	zip code	21202

4. Location of Legal Description

courthouse, registry of deeds, etc.				liber	folio
city, town		tax map	tax parcel		tax ID number

5. Primary Location of Additional Data

_____ Contributing Resource in National Register District
_____ Contributing Resource in Local Historic District
_____ Determined Eligible for the National Register/Maryland Register
_____ Determined Ineligible for the National Register/Maryland Register
_____ Recorded by HABS/HAER
_____ *Historic Structure Report or Research Report at MHT*
__x__ Other: Statewide Inventory by SHA

6. Classification

Category
_____district
_____building(s)
__x__structure
_____site
_____object

Ownership
__x__public
_____private
_____both

Current Function
_____agriculture
_____commerce/trade
_____defense
_____domestic
_____education
_____funerary
_____government
_____health care
_____industry
_____landscape
_____recreation/culture
_____religion
_____social
__X__transportation
_____work in progress
_____unknown
_____vacant/not in use
_____other:

Resource Count

Contributing	Noncontributing	
_____	_____	buildings
_____	_____	sites
1	_____	structures
_____	_____	objects
1	_____	Total

Number of Contributing Resources previously listed in the Inventory
0

7. Description

Inventory No. CH-781

Condition

___ excellent	___ deteriorated
x good	___ ruins
___ fair	___ altered

Prepare both a one paragraph summary and a comprehensive description of the resource and its various elements as it exists today.

Bridge No. 0802200 is a three-span, prestressed concrete girder bridge, built in 1957, that carries MD 225 over Mattawoman Creek. The bridge runs northeast-southwest and carries two lanes of vehicular traffic, one in each direction. Concrete sidewalks for pedestrian traffic are present on each side of the bridge. The bridge is located in a rural area of Charles County, just north of the town of Mason Springs. The Mattawoman Natural Environmental Area is located to the east and west of the bridge. The banks of the Mattawoman Creek are heavily vegetated.

The bridge spans Mattawoman Creek with a vertical clearance of approximately 8.5 feet. The bridge is approximately 180 feet long and 38 feet wide, with a clear roadway width of 30 feet. Each lane of vehicular traffic measures approximately 15 feet wide, while each sidewalk measures just over three feet wide. Metal joint plates are located at the meeting point of each of the spans and at each end of the bridge. It appears that the deck has been surfaced with blacktop within the past ten years.

The substructure of the bridge is composed of two large bents. Each bent consists of seven concrete-filled, fluted, steel Monotubes. The tubes are 18-inch diameter columns. The columns are capped by concrete slabs that support nine concrete beams. These are beams that run the length of the bridge and support the concrete deck. The two outermost concrete beams have paneled exterior surfaces. The finish of the concrete slabs atop the columns appears to be new, suggesting the slabs either have been recently repaired or replaced.

The bridge appears to retain its original parapet. The rail portion consists of two horizontal pipes, with vertical members spaced approximately every four feet. The railing terminates into concrete end panels. No date is inscribed into the concrete portion of the bridge, as was common practice with state highway bridges of this era.

The bridge does not appear to have undergone alterations aside from regular deck resurfacing and maintenance procedures. Some plant growth is present between the sidewalk and the vehicular lanes on the deck of the bridge.

8. Significance

Inventory No. CH-781

Period	Areas of Significance	Check and justify below		
__ 1600-1699	__ agriculture	__ economics	__ health/medicine	__ performing arts
__ 1700-1799	__ archeology	__ education	__ industry	__ philosophy
__ 1800-1899	__ architecture	x engineering	__ invention	__ politics/government
x 1900-1999	__ art	__ entertainment/ recreation	__ landscape architecture	__ religion
__ 2000-	__ commerce		__ law	__ science
	__ communications	__ ethnic heritage	__ literature	__ social history
	__ community planning	__ exploration/ settlement	__ maritime history	x transportation
	__ conservation		__ military	__ other: _____

Specific dates	1957	**Architect/Builder**	Maryland State Roads Comission
Construction dates	1957		

Evaluation for:

__x__ National Register _____Maryland Register _____not evaluated

Prepare a one-paragraph summary statement of significance addressing applicable criteria, followed by a narrative discussion of the history of the resource and its context. (For compliance projects, complete evaluation on a DOE Form – see manual.)

Statement of Significance

The MD 225 Bridge over Mattawoman Creek (MIHP # CH-781, Bridge 0802200) was built in 1957 at the site of at least two earlier bridges over Mattawoman Creek in Charles County, MD. The present MD 225 Bridge is a three-span prestressed concrete girder bridge with a concrete deck. The deck carries two lanes of traffic and is supported by two piers that contain seven concrete monotube columns. It is one of only two bridges built in Charles County during the 1948-1960 period and one of twelve pre-stressed concrete bridges built throughout Maryland in 1957. The bridge is significant as a historically important crossing, associated with the developments and improvements to roadways in northeastern Charles County, especially those that serviced the Indian Head Naval Powder Factory, now known as the Naval Surface Warfare Center, Indian Head Division (NSWC).

Historic Background and Support

MD 225 runs east-west between MD 210 (Indian Head Highway) in northeastern Charles County and US 301 near the geographical center of the county. Both are major north-south routes that connect the NSWC with Washington, DC in the case of the former and south central Maryland with the Delaware and Virginia state lines in the latter. MD 225 crosses Mattawoman Creek just north of the small crossroads town of Mason Springs and just to the east of the town of Indian Head, which is located immediately to the north of the NSWC.

As one of the oldest naval ordnance proving grounds in the nation, the NSWC has had an important impact on the growth of the surrounding areas of Charles and nearby Prince George's counties. Established in 1890 as the Indian Head Proving Ground, the facility was used initially to test weapons, munitions and the armoring materials used in naval vessels. Its formerly, relatively isolated location, on a neck of land created by the Potomac River and Mattawoman Creek in rural Charles County, was ideal for operations that involved test-firing of guns and other explosives; at the same time it was close enough to the Navy Yard in Washington, DC to provide supplies and other material within a short amount of time.[1] By the end of its first decade, the facility's mission had expanded to include the production of smokeless gunpowder. Other manufacturing facilities related to this mission were constructed on the Indian Head Proving Ground throughout the early decades of the twentieth century. As World War I approached, the facility began producing other chemicals used in the production of munitions and gunpowder.

The town of Indian Head located just outside of the facility, grew in pace with the facility's continually evolving and expanding missions. Military activity transformed what had once been a small village geared toward the local tobacco and fishing economy to one that primarily serviced the naval facility. Local residents were employed during the facility's original construction to drain the

[1] Rodney Carlisle, *Powder and Propellants: Energetic Materials at Indian Head, Maryland 1890-2001*, (Denton: University of North Texas Press, 2002), page 8-9.

swampy neck of land contained by the Potomac River and Mattawoman Creek, and to build roadways, bridges and foot paths on and around the facility. By the end of 1890, 100 local residents were employed by the Navy at the facility. After the facility was established, the small village grew and was incorporated by 1920. Indian Head was one of six incorporated municipalities in southern Maryland. [2] In order to attract a large and stable work force, officials at the Proving Ground facilitated the construction of a hotel, school, and housing. Transportation to the facility was also a major problem the Navy helped solve by the construction of a railroad from White Plains, MD to the facility. The rail line opened in May of 1919.[3]

Employees at the facility were not drawn solely from the small village of Indian Head, but also from nearby towns such as Mason Springs, Marbury, and Pisgah in northeastern Charles County. To reach the facility from these areas, residents had to cross Mattawoman Creek. The first crossing over the Creek was a footbridge, built sometime in the 1910s, likely as a result of the build-up at the facility leading up to, or during, the first World War. By the early 1920s, the facility, which was by then known as the Naval Powder Factory, employed 10,000 people. Likely as a result of increased traffic, both pedestrian and vehicular, and the increased use of the automobile, the footbridge was replaced by the State Roads Commission in 1928 by two concrete slab bridges, one with a twenty-foot span, the other with a twenty-three foot span. A road map of the area from 1937 shows the two-span, MD 225 crossing over Mattawoman Creek. [4]

The growth and vitality the facility and surrounding area enjoyed in the early 1920's was somewhat short-lived as cut backs in salaries and the size of the work force at Indian Head ultimately dwindled. The population was reduced to about 500 people by the end of the decade. During the Depression, the facility continued to operate with its reduced workforce. The Civilian Conservation Corps opened a camp on Indian Head which helped to provide work for some local residents. The late 1930s saw an increase in the production of gunpowder and by the start of World War II, the facility employed 62 naval servicemen and 792 civilians.

World War II brought an expansion in both missions and the workforce as the facility began experimenting with the production of rocket fuel, mines and other types of munitions and ordnance. The expanded missions required more reliable and more efficient transportation between the facility and Washington, DC. This resulted in the construction of MD 210, known as the Indian Head Highway. After the war, congressmen and senators worked to keep the facility operating, continuing the research missions started during the war. While the size of the workforce dropped from 5,217 during the war to 1,590 by 1950, the Korean War brought another wave of opportunity to the facility and the surrounding area; by 1953, the facility employed 3,044 people. The facility began manufacturing a number of chemicals used in explosive and propellant production. The production of gunpowder had all but ceased during the late 1940's. The first proposition to rename the facility to the Naval Propellant Plant to reflect the changes in mission and production that had occurred at the facility since its inception occurred in 1952; the change was officially made in 1958.[5]

In August of 1955, the twenty-three foot span bridge over Mattawoman Creek was washed out in a flood. This event necessitated the construction of a new bridge.[6] Recognizing the importance of the crossing and its proximity to the naval facility, the State Roads Commission constructed a new, three-span prestressed concrete beam bridge. Developed in the 1920s in Europe, prestressed concrete was an advance in concrete reinforcing that consisted of encasing pre-tensioned steel cable reinforcing in concrete to increase the

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[2] Larine Barr, ed., *Indian Head History 1890-1997*, Indian Head Division, Naval Surface Warfare Center, 1990. *Town Facts—The Town of Indian Head Maryland*, undated, <http://www.townofindianheadmd.org/ history-townfacts.htm>.
[3] Barr, ibid.
[4] *Indian Head History*, undated, <http://www.globalsecurity.org/military/facility/indian-head-history.htm>. *General Highway Map of Charles County*, (1937).
[5] *Indian Head History*, ibid. Barr, ibid.
[6] State of Maryland State Roads Commission, *Prestressed Concrete Beam Bridge, MD 225 Over Mattawoman Creek at Mason Springs, Plan and Elevation*, (Baltimore: May 1956) Sheet 1.

overall ability of the material to carry greater loads and span wider distances. The first use of prestressed concrete in the United States was the 160-foot Walnut Lane Bridge, constructed in Philadelphia in 1949. In 1955 the Bureau of Public Roads released its *Criteria for Prestressed Concrete Bridges* which, coupled with standardized plans and building techniques that had become commonplace in bridge building technology throughout the early twentieth century, provided engineers with a new material that was versatile, durable, easy to maintain, and inexpensive.[7] Since its introduction, prestressed concrete, in T-beam, girder-encased or box beam varieties, has become a widely used, standard bridge material. According to the State Roads Commission, the first prestressed concrete bridge built in Maryland was the Shawan Road overpass on the Baltimore-Harrisburg Expressway, built in 1953-54. Two prestressed concrete bridges were built in the following two years, and twelve were built in the 1957-58 period-- the MD 225 Bridge is one example.[8]

Monotube pile bents support the bridge. Monotube is a proprietary pile that has been available since the early 1920s.[9] A cold-rolled steel tube filled with concrete, it was popular in Maryland bridges built between the 1950s and the 1970s. The distinctive fluted appearance of the Monotube is functional, for it makes the column more rigid and stronger than a round column. However, the Maryland State Highway Administration discontinued the use of monotubes during the last decade of the twentieth century due to the belief that its thin shell was subject to failure.[10] The pile continues to be produced by the Monotube Pile Corporation and utilized elsewhere for bridges and other structures.

The construction of the MD 225 Bridge in 1957 also involved grade and alignment changes to Mattawoman Creek. These changes were meant to prevent a repeat of the scenario that destroyed the 1928 concrete slab bridges. The creek channel was widened to 50 feet and rerouted, especially beneath the bridge spans. Wide shoulders were added to the expanded channel in order to accommodate flood waters.[11]

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[7] P.A.C Spero & Company and Louis Berger & Associates, *Historic Highway Bridges in Maryland: 1631-1960: Historic Context Report* (Baltimore, MD: Maryland State Highway Administration, July 1995), 138.
[8] State Roads Commission, *Report of the State Roads Commission of Maryland*, 1954, page 64., State Roads Commission, *Report of the State Roads Commission of Maryland*, 1956. State Roads Commission, *Report of the State Roads Commission of Maryland*, 1958.
[9] http://www.engineering.manhattan.edu/civil/CGT/pubs/CaseHist5_2004%20Tapertube.pdf; http://www.monotube.com.
[10] Letter of April 6, 2004, from Richard Ervin of the Maryland State Highway Administration to Stephen W. Tull of URS Corporation.
[11] State of Maryland State Roads Commission, *Prestressed Concrete Beam Bridge, MD 225 Over Mattawoman Creek at Mason Springs, Plan of Stream Change*, (Baltimore: May 1956) Sheet 5.

9. Major Bibliographical References

Inventory No. CH-781

See Continuation Sheet

10. Geographical Data

Acreage of surveyed property _____
Acreage of historical setting _____
Quadrangle name Port Tobacco, MD Quadrangle scale: 1:24,000

Verbal boundary description and justification
Md 225 Bridge carries MD 225 over Mattawoman Creek. The Mattawoman Natural Environmental Area is located to the east and west of the bridge. The bridge is located on the south section of MD 225, south of Livingston Road. The bridge had been associated with this site since its construction.

11. Form Prepared by

name/title	Craig Tuminaro / Mary E. Crowe and Stan Popovich		
organization	Urs Corporation / Hardlines Design Company	date	October 2004
street & number	200 Orchard Ridge Drive / 4608 Indianola Avenue	telephone	301-258-9780 / 614-784-8733
city or town	Gaithersburg / Columbus	state	MD / OH

The Maryland Inventory of Historic Properties was officially created by an Act of the Maryland Legislature to be found in the Annotated Code of Maryland, Article 41, Section 181 KA, 1974 supplement.

The survey and inventory are being prepared for information and record purposes only and do not constitute any infringement of individual property rights.

return to: Maryland Historical Trust
DHCD/DHCP
100 Community Place
Crownsville, MD 21032-2023
410-514-7600

Maryland Historical Trust
Maryland Inventory of
Historic Properties Form

Inventory No. CH-781

Name Bridge No. 0802200, MD 225 over Mattawoman Creek
Continuation Sheet

Number 9 Page 1

Rodney Carlisle, *Powder and Propellants: Energetic Materials at Indian Head, Maryland 1890-2001.* Denton: University of North Texas Press, 2002.

Larine Barr, ed., *Indian Head History 1890-1997*, Indian Head Division, Naval Surface Warfare Center, 1990. *Town Facts—The Town of Indian Head Maryland*, undated, <http://www.townofindianheadmd.org/ history-townfacts.htm>.

Indian Head History, undated, <http://www.globalsecurity.org/military/facility/indian-head-history.htm>. *General Highway Map of Charles County*, 1937.

State of Maryland State Roads Commission, *Prestressed Concrete Beam Bridge, MD 225 Over Mattawoman Creek at Mason Springs, Plan and Elevation.* Baltimore: May 1956.

P.A.C Spero & Company and Louis Berger & Associates, *Historic Highway Bridges in Maryland: 1631-1960: Historic Context Report*. Baltimore, MD: Maryland State Highway Administration, July 1995.

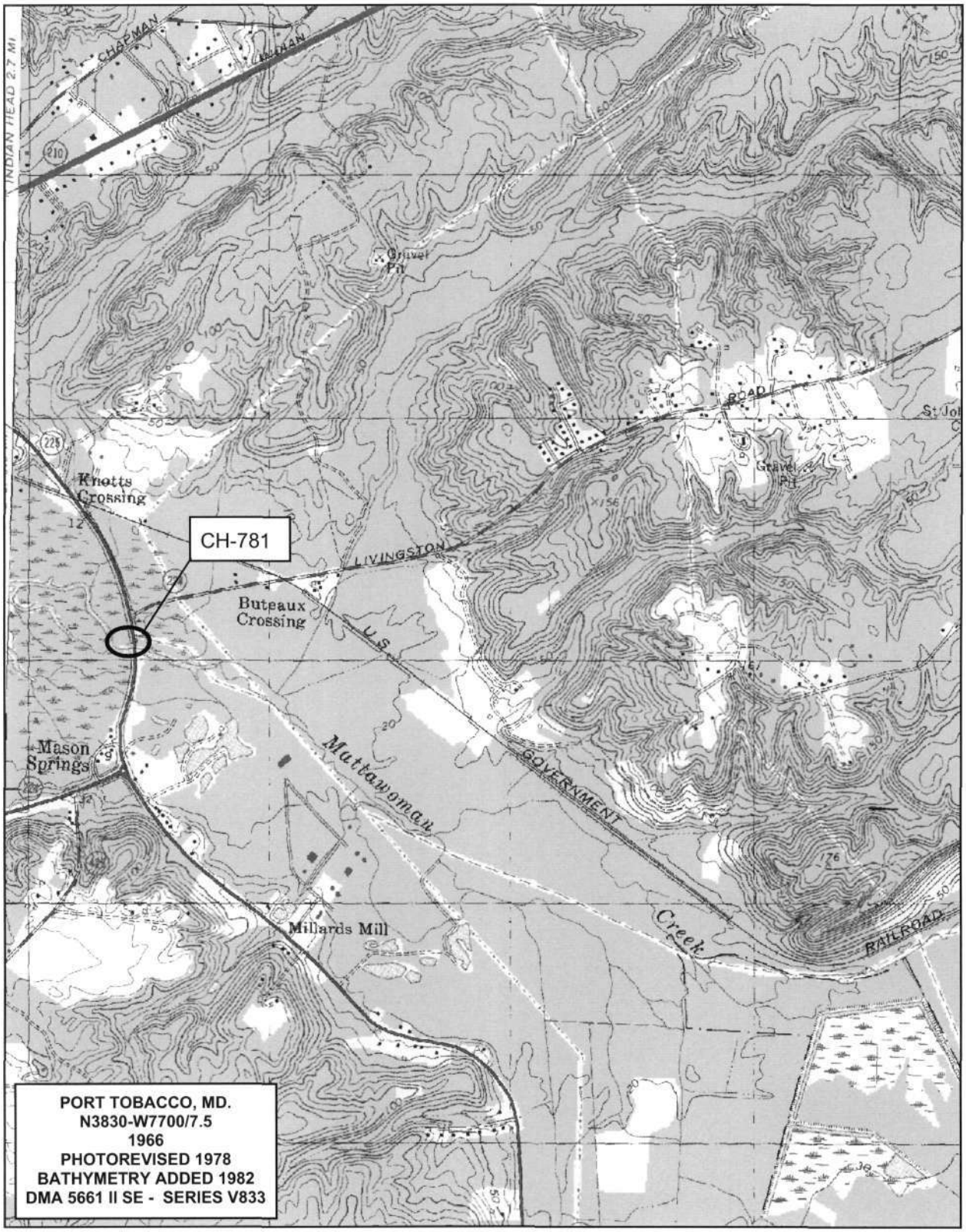
State Roads Commission, *Report of the State Roads Commission of Maryland.* 1954, 1956, 1958.

http://www.engineering.manhattan.edu/civil/CGT/pubs/CaseHist5_2004%20Tapertube.pdf; http://www.monotube.com.

Letter of April 6, 2004, from Richard Ervin of the Maryland State Highway Administration to Stephen W. Tull of URS Corporation.

State of Maryland State Roads Commission, *Prestressed Concrete Beam Bridge, MD 225 Over Mattawoman Creek at Mason Springs, Plan of Stream Change.* Baltimore: May 1956.

Sources Consulted:
Maryland SHA Cultural Resource Library and Bridge Engineering Department, Baltimore - Reports published by or for the State Roads Commission, bridge files
Maryland Highway Administration, District 5-Prince Frederick Shop, 100 Hallowing Point Road, Prince Frederick MD, 410-535-1748
Maryland Historical Trust Library, Crownsville - Inventory of Historic Places, National Register Nominations, Determinations of Eligibility, Cultural Resource Reports
Maryland State Archives, Annapolis - photographs from the Sarikas Collection and materials published by the State Roads Commission
Enoch Pratt Library (Maryland Room), Baltimore - vertical files dealing with Maryland bridges
Library of Congress ,Washington, DC - General information on bridges and additional Maryland bridge material
New Jersey State Library, Trenton - Engineering News-Record on microfilm
New York Public Library, (Science, Business, and Industry Library), New York - Additional SHA annual reports



1:24,000

0 0.125 0.25 0.5 0.75 1 Miles

0 0.25 0.5 1 1.5 2 Kilometers

MIHP # CH-781
Bridge 0802200
MD 225 over Mattawoman Creek
Potomac Heights Vicinity
Charles County
Port Tobacco, MD. Quadrangle

MHP # CH-781
Bridge # 0802200, MD 225 over Mattawoman Creek
Charles County, MD
Photographer: Stan Popovich, Hardlines Design Company
Date: 6/11/03
Location of Negative: MD SHPO
looking north at bridge deck
1/6

MIHP # CH-781
Bridge # 0802200, MD 225 over Mattawoman Creek
Charles County, MD
photographer: Stan Popovich, Hardlines Design Company
Date: 6/11/03
Location of Negative: MD SHPO
looking South at bridge deck
2/6

MHP # CH-781
Bridge # 0802200, MD 225 over Mattawoman Creek
Charles County, MD
Photographer: Stan Popovich, Hardlines Design Company
Date: 6/11/03
Location of Negative: MD SHPO
looking northwest at bridge deck
3/6

MHP # CH-781
Bridge # 0802200, MD 225 over Mattawoman Creek
Charles County, MD
Photographer: Stan Popovich, Hardlines Design Company
Date: 6/11/03
Location of Negative: MD SHPO
looking southeast at bridge deck
4/6

MIHP # CH-781
Bridge # 0802200, MD 225 over Mattawoman Creek
Charles County, MD
Photographer: Stan Popovich, Hardlines Design Company
Date: 6/11/03
Location of Negative: MD SHPO
looking southwest at bridge substructure
5/6

MHP # CH-781
Bridge # 0802200, MD 225 over Mattawoman Creek
Charles County, MD
Photographer: Stan Popovich, Hardlines Design Company
Date: 6/11/03
Location of Negative; MD SHPO
looking southwest at bridge substructure
6/6